

REMARKS

Claims 1-20 are pending in this Application. No new matter is added.

Claims 1-7 and 14-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Anderson (US Patent No. 5,973,734) in view of Yamagishi et al. (US Patent No. 6,968,118, and hereinafter “Yamagishi”). Claims 8-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Anderson in view of Yamagishi, and further in view of Sarbadhikari et al. (US Patent No. 5,477,264, and hereinafter “Sarbadhikari”).

Applicant respectfully traverses these rejections in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined by exemplary claim 1) is directed to a digital camera.

The digital camera includes a photographing component for photographing a subject, a setting component for setting whether or not a generation of an intermediate image is to be carried out, and for setting a resolution of an original image, so that if the generation of the intermediate image is to be carried out, the setting component sets a resolution of the intermediate image based on a set resolution of the original image; an intermediate image generating component for generating, when intermediate image generation, which is for verifying a state of focus, is set by the setting component, the intermediate image having a resolution between a resolution of an original image and a resolution of a thumbnail image, and a storage component for storing an original image photographed by the photographing component and the generated intermediate image.

When the set resolution of the original image is changed to a new set resolution, the setting component automatically changes the resolution of the intermediate image based on the new set resolution of the original image.

In a conventional digital camera, as described in the Background of the present Application, when the pixel number of a photographing sensor such as a CCD or a CMOS is large, the resolution of the thumbnail image has been insufficient for verifying the photographed focus. An intermediate image having a resolution between the original image and the thumbnail image has been applied for achieving this object (e.g., see Application at page 1, line 23 - page 2, line 5).

However, a problem with a conventional digital camera is that the photographing interval becomes long when an intermediate image that has a higher resolution than a thumbnail image is generated and stored in the storage medium per photographing. This is because, in order to generate and display the intermediate image after photographing, the next photographing cannot be carried out during this processing, and it takes a long time until preparation for photographing the next image is finished (e.g., see Application at page 2, line 6-13).

The claimed invention, however, provides a digital camera, in which a setting component for setting whether a generation of an intermediate image is to be carried out, , and for setting a resolution of an original image, so that if the generation of the intermediate image is to be carried out, the setting component sets a resolution of the intermediate image based on a set resolution of the original image. When the set resolution of the original image is changed to a new set resolution, the setting component automatically changes the resolution of the intermediate image based on the new set resolution of the original image (e.g., see Application at page 10, lines 3-20; page 1; page 15, last line – page 16, line 4).

This feature is important because by using this system in a digital camera, a user can optionally set whether or not to generate the intermediate image. When the intermediate image is not to be generated, the intermediate image is not generated, and because the photographing interval becomes shorter, the user can adjust the time of the photographing interval (e.g., see Application at page 3, lines 7-12).

II. THE PRIOR ART REJECTION

A. Anderson and Yamagishi rejection

In rejecting claims 1-7 and 14-20, the Examiner alleges that one of ordinary skill in the art would have combined Anderson with Yamagishi to render obvious the claimed invention. Applicant respectfully submits, however, that the references would not have been combined as alleged by the Examiner and that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, Anderson and Yamagishi do not teach or suggest, “a setting component for setting whether a generation of an intermediate image is to be carried out, and for setting a resolution of an original image, so that if the generation of the intermediate image is to be carried out, the setting component sets a resolution of the intermediate image based on a set

resolution of the original image... wherein, when the set resolution of the original image is changed to a new set resolution, the setting component automatically changes the resolution of the intermediate image based on the new set resolution of the original image,” (emphasis added by Applicant) as recited in claim 1, and similarly recited in claims 8 and 14.

The Examiner alleges that Anderson disclosed selection of different resolutions for the intermediate image.

Anderson, however, merely discloses that screennail image 608 has a resolution that fills the visible area of the LCD screen 402 (col. 6, lines 28-44). Therefore, Anderson does not teach or suggest that the resolution of the intermediate image is changed based on a change of the resolution of the original image.

Further, column 6, lines 28-44 of Anderson, upon which the Examiner bases his rejection, discloses that the generation of screennail image 608 is optional. This is because the size of the image sensor 224 is small enough compared to the size of the LCD screen 402. Therefore, the camera of Anderson does not need to change the size of the screennail image 608, since the image data 602 can be rapidly provided to the LCD screen 402. Therefore, Anderson fails to teach or suggest choosing different resolutions for the intermediate image.

On the other hand, the present invention recites automatically selecting the resolution of the intermediate image based on the resolution of the original image, even if the resolution of the original image is set and changed by the user. As a result, the present invention can provide an intermediate image of minimum resolution to verify the state of focus. Thus, the present invention can prevent the intermediate image from having unnecessarily large resolution, can speed up the generation of the intermediate image, and can enable efficient use of the recording medium.

Moreover, Applicant submits that Yamagishi fails to make up the deficiencies of Anderson.

Indeed, Yamagishi discloses an image processing system with an image display unit 28 (col. 28, lines 26-30). Yamagishi, however, is silent about, and fails to teach or suggest, “a setting component for setting whether a generation of an intermediate image is to be carried out, and for setting a resolution of an original image, so that if the generation of the intermediate image is to be carried out, the setting component sets a resolution of the intermediate image based on a set resolution of the original image... wherein, when the set resolution of the original image is changed to a new set resolution, the setting component

automatically changes the resolution of the intermediate image based on the new set resolution of the original image,” (emphasis added by Applicant) as recited in claim 1, and similarly recited in claims 8 and 14.

Indeed, the Examiner does not even allege that Yamagishi teaches or suggests this feature. The Examiner merely relies on Yamagishi for allegedly teaching the setting component (e.g., see Office Action at page 3, lines 11-17).

Since Yamagishi does not overcome the deficiencies of Anderson, the combination of references fails to render the rejected claims obvious.

Moreover, Applicant submits that Anderson and Yamagishi fail to teach or suggest, “a setting component for setting whether a generation of an intermediate image is to be carried out,” as recited in claim 1, and similarly recited in claims 8 and 14.

The Examiner concedes that Anderson fails to teach or suggest this feature of the claimed invention (Office Action at page 3, lines 8-10). The Examiner alleged that Yamagishi teaches this feature.

Indeed, Yamagishi teaches an image processing system with an optional image display unit (col. 26, lines 40-52). The image display of Yamagishi, however, merely displays an image from the original captured data and cannot be equate to the claimed intermediate image, which has a resolution between a resolution of an original image and a resolution of a thumbnail image, as recited in claims 1, 8, and 14. Indeed, the Examiner attempts to pick and choose different units from device of Yamagishi, without considering the scope of the claimed invention, to enable Anderson’s device to appear to have a similar structure as the claimed invention.

Indeed, Yamagishi does not teach a thumbnail image and an intermediate image in the camera, in which the alleged setting component sets a generation of the intermediate image. Therefore, Yamagishi fails to teach or suggest the claimed setting component, as recited in claims 1, 8, and 14.

Moreover, Applicant submits that in rejecting claims 2, 4, and 5, the Examiner has not provided any reasoning for combining the features of Anderson with the teachings of Yamagishi.

Applicant respectfully submits, however, “*Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*”

(*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006))

If the Examiner wishes to maintain these rejections, the Examiner must provide articulated rational to explain why one of ordinary skill would have combined each feature of Anderson that the Examiner is attempting to combine with Yamagishi.

Furthermore, in rejecting claim 3, the Examiner alleges that it is well known in the art to have an intermediate image approximately 1/3 the size of the original image (Office Action at page 4, section 4, lines 4-10). However, notice of facts beyond the record which may be taken by the Examiner must be “*capable of such instant and unquestionable demonstration to defy dispute.*” “*It is not appropriate for the Examiner to take official notice without citing a prior art reference where certain facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known*” (MPEP §2144.03)

MPEP §2144.03 (c) also states, “*If applicant adequately traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. ...If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding.*”

Since the alleged references fail to disclose or suggest an intermediate image approximately 1/3 the size of the original image and the Examiner has not provided any evidence of the facts asserted to be well-known, the claimed feature as recited by claim 3 is not demonstrated as being well known.

Moreover, Applicant submits that the alleged references fail to teach or suggest, “*wherein the setting component further sets whether a generation of a thumbnail image is to be carried out,*” as recited in claim 4.

The Examiner alleges that “*the Examiner is considering Yamagishi to set whether any reduced image data used for display purposes is to be generated, which includes both intermediate image as well as thumbnail images*” (Office Action at page 5, lines 12-15).

Applicant respectfully submits that the Examiner's conclusion is based on improper hindsight reasoning.

That is, the image display of Yamagishi merely displays an image from the original captured data and cannot be equate to the claimed intermediate image, which has a resolution between a resolution of an original image and a resolution of a thumbnail image, as recited in

independent claim 1. Indeed, the Examiner attempts to pick and choose different units from device of Yamagishi, without considering the scope of the claimed invention, to enable Anderson's device to appear to have a similar structure as the claimed invention. Yamagishi does not teach a thumbnail image and an intermediate image in the camera, in which the alleged setting component sets a generation of the intermediate image. Therefore, Yamagishi fails to teach or suggest the claimed setting component, as recited in claim 4.

Furthermore, Applicant submits that the alleged references fail to teach or suggest, "*a setting component sets a size of the thumbnail image to be generated,*" as recited in claim 6, and "*wherein the thumbnail image is generated by sampling pixels at predetermined intervals,*" as recited in claim 7.

The Examiner alleges that Anderson in column 7, lines 52-65 teaches claims 6 and 7. The Examiner, however, is clearly incorrect.

Indeed, Anderson in column 7, lines 52-65, upon which the Examiner based his rejection, discloses, "*generate the thumbnail image 606, the YCC data in the frame buffers 536 is converted from the YCC 222 format into YCC 422 format and then resized by a conversion and resizing process 616. During the conversion and resizing process 616, the thumbnail image 606 may be resized by averaging in which a block of pixel values from the YCC 422 data are averaged to represent one pixel value of the thumbnail image 606, and/or by sub-sampling the YCC 422 data in which only a certain number pixels in a block are used to represent one pixel in the thumbnail image 606.*"

Anderson, however, in column 7, lines 52-65 (or anywhere else, for that matter) fails to teach or suggest, "*a setting component sets a size of the thumbnail image to be generated,*" as recited in claim 6, and "*wherein the thumbnail image is generated by sampling pixels at predetermined intervals,*" as recited in claim 7.

Moreover, Applicant submits that one with ordinary skill in the art would not have combined Anderson with the teachings of Yamagishi.

That is, the Examiner attempts to pick and choose different elements and functions from devices of Yamagishi to enable the non analogous device of Anderson to appear to have a structure similar to the claimed digital camera. Therefore, Applicant respectfully submits that the Examiner is improperly using the claimed invention as a roadmap and that one of ordinary skill in the art would not have combined the references as alleged by the Examiner.

Indeed, adding the teachings of Yamagishi to the subordinate image processing

system of Anderson would change the principle of operation of Anderson, since the references teach two distinct systems that have different structures, are for different purposes, and perform in different environments.

Therefore, Applicant respectfully submits that one with ordinary skills in the art would not have combined Anderson with the teachings of Yamagishi, and even if combined, the alleged combination does not teach or suggest (or render obvious) each and every feature of the claimed invention. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

B. Anderson, Yamagishi, and Sarbadhikari rejection

In rejecting claims 8-13, the Examiner alleges that one of ordinary skill in the art would have combined Anderson and Yamagishi with Sarbadhikari to render obvious the claimed invention. Applicant respectfully submits, however, that the references would not have been combined as alleged by the Examiner and that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, Anderson, Yamagishi, and Sarbadhikari do not teach or suggest, *“a setting component for setting whether a generation of an intermediate image is to be carried out, and for setting a resolution of an original image, so that if the generation of the intermediate image is to be carried out, the setting component sets a resolution of the intermediate image based on a set resolution of the original image... wherein, when the set resolution of the original image is changed to a new set resolution, the setting component automatically changes the resolution of the intermediate image based on the new set resolution of the original image,”* (emphasis added by Applicant) as recited in claim 8.

Indeed, as set forth above in section A, Anderson and Yamagishi fail to teach or suggest this feature of the claimed invention.

Moreover, Applicant submits that Sarbadhikari fails to make up the deficiencies of Anderson and Yamagishi.

Indeed, the Examiner does not even allege that Sarbadhikari teaches or suggests this feature. The Examiner merely relies on Sarbadhikari for allegedly teaching a machine-readable medium (e.g., see Office Action at page 7, lines 15-20).

Since Sarbadhikari does not overcome the deficiencies of Anderson and Yamagishi,

the combination of references fails to render the rejected claims obvious.

Moreover, Applicant submits that one with ordinary skills in the art would not have combined Anderson and Yamagishi with the teachings of Sarbadhikari.

That is, the Examiner attempts to pick and choose different elements and functions from devices of Yamagishi and Sarbadhikari to enable the non analogous device of Anderson to appear to have a structure similar to the claimed digital camera. Therefore, Applicant respectfully submits that the Examiner is improperly using the claimed invention as a roadmap and that one of ordinary skill in the art would not have combined the references as alleged by the Examiner.

Indeed, adding the teachings of Sarbadhikari and Yamagishi to the subordinate image processing system of Anderson would change the principle of operation of Anderson, since the references teach distinct systems that have different structures, are for different purposes, and perform in different environments.

Furthermore, Applicant submits that the Examiner's rejection of claim 9 is vague.

That is, the Examiner cites a new reference (i.e., Suzuki) which was not applied in the rejection of independent claim 8 (Office Action at page 8, section 12, line 1). Applicant requests appropriate correction.

Moreover, in rejecting claim 10, the Examiner alleges that it is well known in the art to have an intermediate image approximately 1/3 the size of the original image (Office Action at page 8, section 13). However, notice of facts beyond the record which may be taken by the Examiner must be "*capable of such instant and unquestionable demonstration to defy dispute.*" "*It is not appropriate for the Examiner to take official notice without citing a prior art reference where certain facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known*" (MPEP §2144.03)

MPEP §2144.03 (c) also states, "*If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. ..If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding.*"

Since the alleged references fail to disclose or suggest an intermediate image approximately 1/3 the size of the original image and the Examiner has not provided any

evidence of the facts asserted to be well-known, the claimed feature

Moreover, Applicant submits that the alleged references fail to teach or suggest, “*wherein the setting component sets whether a generation of a thumbnail image is to be carried out,*” as recited in claim 11.

The Examiner alleges that “*the Examiner is considering Yamagishi to set whether any reduced image data used for display purposes is to be generated, which includes both intermediate image as well as thumbnail images*” (Office Action at page 9, lines 15-18).

Applicant respectfully submits that the Examiner's conclusion is based on improper hindsight reasoning.

That is, the image display of Yamagishi merely displays an image from the original captured data and cannot be equate with the claimed intermediate image, which has a resolution between a resolution of an original image and a resolution of a thumbnail image, as recited in independent claim 1. Indeed, the Examiner attempts to pick and choose different units from device of Yamagishi, without considering the scope of the claimed invention, to enable Anderson's device to appear to have a similar structure as the claimed invention. Yamagishi does not teach a thumbnail image and an intermediate image in the camera, in which the alleged setting component sets a generation of the intermediate image. Therefore, Yamagishi fails to teach or suggest the claimed setting component, as recited in claim 11.

Furthermore, Applicant submits that the alleged references fail to teach or suggest, “*wherein the thumbnail image is generated by sampling pixels at predetermined intervals,*” as recited in claim 13.

The Examiner alleges that Anderson in column 7, lines 52-65 teaches claims 6 and 7. The Examiner, however, is clearly incorrect.

Indeed, Anderson in column 7, lines 52-65, upon which the Examiner based his rejection, discloses, “*generate the thumbnail image 606, the YCC data in the frame buffers 536 is converted from the YCC 222 format into YCC 422 format and then resized by a conversion and resizing process 616. During the conversion and resizing process 616, the thumbnail image 606 may be resized by averaging in which a block of pixel values from the YCC 422 data are averaged to represent one pixel value of the thumbnail image 606, and/or by sub-sampling the YCC 422 data in which only a certain number pixels in a block are used to represent one pixel in the thumbnail image 606.*”

Anderson, however, in column 7, lines 52-65 (or anywhere else, for that matter) fails

to teach or suggest, “*wherein the thumbnail image is generated by sampling pixels at predetermined intervals,*” as recited in claim 13.

Moreover, Applicant submit that in rejecting claims 9, 11, and 12, the Examiner has not provided any reasoning for combining the features of Anderson with the teachings of Yamagishi and Sarbadhikari. Applicant respectfully submits, however, “*Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*” (*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006))

If the Examiner wishes to maintain these rejections, the Examiner must provide articulated rational to explain why one of ordinary skill would have combined each feature of Anderson that the Examiner is attempting to combine with Yamagishi and Sarbadhikari.

Therefore, Applicant respectfully submits that one with ordinary skills in the art would not have combined Anderson and Yamagishi with the teachings of Sarbadhikari, and even if combined, the alleged combination does not teach or suggest (or render obvious) each and every feature of the claimed invention. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-20, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

Serial No. 10/620,442
Docket No. FSF-03381

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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 12/18/08

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